AMENDMENTS TO THE CLAIMS

This listing of the claims will replace all prior versions, and listings, of claims in the application.

1-17. (Cancelled)

18. (Currently Amended) A method for controlled release of NO or an NO donor ~~modulating compound~~ comprising administering to tissue ~~in need thereof~~ a biocompatible, polymerizable, macromer composition comprising at least one NO carrying region or the NO donor ~~modulating compound~~, wherein NO or the NO ~~modulating compound~~ donor is complexed to the macromer composition, and wherein the NO or the NO donor ~~modulating compound~~ is released from the macromer composition following polymerization *in situ*, under physiological conditions, wherein the macromer composition comprises one or more region selected from the group consisting of water soluble regions, tissue adhesive regions, and polymerizable end group regions and one or more therapeutic or diagnostic agents selected from the group consisting of proteins, carbohydrates, nucleic acids, organic molecules, inorganic molecules, biologically active molecules, cells, tissue, and tissue aggregates.

19. (Cancelled)

20. (Currently Amended) A method of reducing formation of surgical adhesions comprising administering to an individual in need thereof a biocompatible, polymerizable, macromer composition comprising at least one NO carrying region or an NO ~~modulating compound~~ donor, wherein NO or the NO ~~modulating compound~~ donor is complexed to the macromer composition, and wherein the NO or the NO

~~modulating compound~~ donor is released from the macromer composition following polymerization *in situ*, under physiological conditions, wherein the macromer composition comprises regions selected from the group consisting of water soluble regions, tissue adhesive regions, and polymerizable end group regions.

21. (Previously Presented) The method of claim 20 wherein the macromer further comprises degradable regions.

22-31. (Cancelled)

32. (Previously Presented) The method of claim 18 wherein the macromer composition is water soluble.

33. (Previously Presented) The method of claim 18, wherein the macromer comprises a water soluble region, an NO carrying region, a cell adhesion ligand, and a free radical polymerizable region.

34. (Previously Presented) The method of claim 18, wherein the water soluble region is polyvinyl alcohol and the polymerizable group is an acrylamide.

35. (Previously Presented) The method of claim 18, wherein the macromer composition comprises an acryloyl-PEG-Cys-NO macromer.

36. (Previously Presented) The method of claim 18, wherein the macromer composition comprises an acryloyl-PEG-Lys_5-NO macromer.

37. (Previously Presented) The method of claim 18, wherein the macromer composition comprises a PEG-DETA-NO macromer.

38. (Previously Presented) The method of claim 18, wherein the macromer composition comprises a PVA-NH_2-NO macromer.

39. (Previously Presented) The method of claim 18, wherein the macromer composition comprises a PVA-Cys-NO macromer.

40. (Previously Presented) The method of claim 18, wherein the macromer composition comprises a PVA-NO-βFGF macromer.

41. (Previously Presented) The method of claim 18, wherein the macromer composition is administered to a smooth muscle cell tissue.

42. (Previously Presented) The method of claim 18, wherein the macromer composition is administered to blood.

43. (Previously Presented) The method of claim 18, wherein the macromer composition further comprises at least one degradable region.

44 (Previously Presented) The method of claim 43, wherein the degradable region is attached to a water soluble region, and a polymerizable end group region is attached to the degradable region.

45. (Previously Presented) The method of claim 43, wherein a water soluble region is attached to the degradable region, and the polymerizable end group region is attached to the water soluble region.

46. (Previously Presented) The method of claim 18, further comprising initiating polymerization *in situ*.